

REMARKS/ARGUMENTS

Claims 1-47 were pending. Claims 1, 2, 5-38, 41, 43, 45 and 47 are withdrawn and canceled from the present application as being drawn to a non-elected invention, subject to and without prejudice to prosecution in divisional or continuation applications relating to the present patent application. Pending claims 3, 4, 39, 40, 42, 44 and 46 are amended herein, and new claim 48 has been added. Support for the amendments is found, for instance, in the claims as originally filed and throughout the specification. Phrases have been made more consistent in the pending claims in accordance with the Examiner's suggestion, but without changing the meaning of the claim from the original claim language. The specification has been amended to identify registered trademarks. No new matter was added.

The Examiner is thanked for recording his consideration of Applicants' IDS.

APPLICANTS' RESPONSE**Claim objection**

The amendment to claims 39, 40 and 46 render this objection moot.

Specification objection

The specification has been amended to identify the sequences in Figure 1 by reciting sequence identifiers in the Brief Description of Figure 1, and to identify trademarks. These amendments render moot the corresponding objections to the specification and as specified in the "Notice to Comply".

The disclosure is objected to for containing an embedded hyperlink. According to MPEP 608.01 VII, "a hyperlink or a browser-executable code are a URL placed between these symbols "< >" and http:// followed by a URL address." The recitation in the instant specification on pg. 38 has neither the "< >" or "http://." Therefore, the recitation is not a hyperlink or browser-executable code.

Priority

The Examiner has state that Applicants' specification is not entitled to the benefit

under 35 USC § 119(e) of priority application 60/257,073, filed 12/21/2000. Applicants' claims are directed to SEQID No:1, regardless of the denomination of the encoded gene. Applicants state in the specification that "the full length coding sequence claimed by Applicants is derived from cDNA as set forth in FIG. 1 and SEQID No:1. Sequence data have been deposited with the EMBL/GenBank Data Libraries under Accession number AF 181984." See, specification at page 11, lines 26-29.

Accordingly, Applicants' provisional filing of application 60/257,073, entitles Applicants to the right to claim the 12/21/2000 priority date of that application in the present utility filing. Applicants respectfully request, therefore, in light of their early deposit of the full-length sequence data, without gaps, as supplied in the provisional filing, that the Examiner find that Applicants are entitled to the effective filing date of 12/21/2000 in the present application.

Response to Rejection under 35 U.S.C. § 101

The amendments to claims 39 and 44 render this rejection moot.

Response to Rejection under 35 U.S.C §112, 2nd paragraph

Claims 3, 39, 40, 42, 44 and 46 stand rejected under 35 U.S.C. §112, 2nd paragraph as being indefinite. The term "operably fused thereto" in claim 46 is neither vague nor indefinite. Therefore, the amendments to the claims render this rejection moot.

Response to Rejection under 35 U.S.C. §112, 1st paragraph

Claims 3, 39, 40, 42-44 and 46 stand rejected under 35 U.S.C. §112, 1st paragraph as failing to comply with the written description requirement enablement. However, the amendments to the claims render this rejection moot.

Serine/threonine kinases, as referenced in claim 42, have a well-established structure/function relationship for their function domains. Accordingly, one of skill in the art would know what truncation fragments would retain activity, what positions could be mutated conservatively, or not at all, to retain activity, etc. Support may be found in the specification for this phrase as it is used in the claims, at least at pg. 13, lines 9-15;

pg. 17, line 17; pg. 15, line 20; and pg. 18, line 11. Regarding the CaM structure/function analysis, expression patterns offer a well recognized definition of activity.

Accordingly, Applicants' respectfully seek withdrawal of this rejection of claims 3, 39, 40, 42-44 and 46, and allowance at the earliest opportunity.

Response to Rejection under 35 U.S.C. §102

Claims 3, 4, 39, 40 and 42-44 stand rejected under 35 U.S.C. §102(b) as being anticipated by Gardner *et al.* (*Genomics*, 64, 46-59, 2000). However, as discussed above, the instant specification is entitled to the benefit of priority application 60/257,073, filed 12/21/2000. Consequently, the reference cited is not art under 35 U.S.C. §102(b), if unpatentable, with which we disagreed, it would be under 35 U.S.C. §102(a).

As averred in the attached Declaration under 37 CFR 1.132, the work described by Gardner *et al.* is entirely that of the inventors of the instant application. Therefore, this reference is not by *others* as stated in 35 U.S.C. §102(a), and a rejection under §102(a) is, therefore, not applicable.

Claims 3, 39 and 42-44 also stand rejected under 35 U.S.C. §102(b) as being anticipated by Accession Number: AB023027, NCBI nucleotide database, 4/28/1999. However, Accession No. AB023027 can not anticipate the claimed invention in claims 3, 39 and 42-44 since it fails to teach SEQID No:1. As noted in the attached NBCI Sequence Revision history, the original version of AB023027 dated 12/6/99, omitted nucleotides 631-637, and is, therefore, incomplete and unable to anticipate Applicants' SEQID No:1. Other than applicants' own work, the identity of the "missing" nucleotides 631-637 is established for the first time only in the *Revised Listing*, which was not been updated and disclosed to the public until July 25, 2002, after the effective filing date of Applicants' application. The Sequence Revision History for AB023027 from NCBI is attached.

Claims 3, 4, 39, 40, 42, 44 and 46 stand further rejected under 35 U.S.C. §102(b) as being anticipated by Shirai *et al.* However, the amendments to the claims render this rejection moot as only Applicants' sequence is claimed, regardless of nomenclature.

Accordingly, Applicants' respectfully seek withdrawal of the §102(b) rejection of

Applicants' pending claims, and allowance at the earliest opportunity.

Response to Rejection under 35 U.S.C. §103

Claims 44 and 46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gardner *et al.* and Leninger *et al.*, in view of Shirai *et al.* and Kiley *et al.* However, as stated above, the Gardner reference is removed as prior art by the attached Declaration under 1.132. While as stated by the Examiner, Leninger *et al.* teaches generally that clone DNA molecules are double stranded molecules, each of which has a polynucleotide sequence that is complimentary to the other, the reference fails to teach Applicants' SEQID No:1. Shirai *et al.* similarly fails to render Applicants' invention obvious for the same reasons as it cannot anticipate Applicants' invention. Even in light of the abstract by Kiley *et al.*, the rejection of Applicants' claims as presently amended in view of Shirai *et al.* is moot, since only Applicants' sequence is claimed in the present invention, regardless of nomenclature.

Accordingly, even if all four of the references cited by the Examiner were combined and viewed by one of ordinary skill in the art, Applicants' pending claims could not be obvious – since none of the cited references can provide the underlying key element, which is Applicants' sequence corresponding to SEQID No:1. Therefore, Applicants' invention is not obvious over the cited prior art, alone or combined.

In addition, claims 39, 40, 42 and 44 stand rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Accession No. AB023027 (12/4/99), in view of Bendig and Lehninger *et al.* However, Accession No. AB023027 cannot render the claimed invention (claims 39, 40, 42 and 44) obvious for the same reason it could not anticipate claim 3 - Accession No. AB023027 does not teach SEQID No:1. As noted in the attached NBCI Sequence Revision history, the original version of AB023027 (12/6/99) fails to specify nucleotides 631-637, and is, therefore, incomplete and unable to anticipate Applicants' SEQID No:1, as cited in the above 102(b) rejection of claim 3.

Neither the general teaching of double stranded DNA by Lehninger *et al.* or recombinant production of foreign proteins in mammalian cells by Bendig provide Applicants' SEQID No:1. Therefore, even when combined with the sequence provided

in Accession No. AB023027, version 12/6/99, which is incomplete because it omits nucleotides 631-637, the cited art cannot render Applicants' claimed invention obvious, since as above, none of the references can provide the underlying key element, which is Applicants' sequence corresponding to SEQID No:1. Therefore, also as above, Applicants' invention is not obvious over the cited prior art, alone or combined.

Accordingly in light of Applicants' foregoing discussion, it is believed that all rejections have been overcome, and the pending claims are in condition for allowance. Applicants', therefore, respectfully request withdrawal of the present rejections, and seek early allowance of the pending claims. Should any questions remain, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,

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